

THE FIELD OF ELECTRICITY

Inventor Marconi Coming to Woo American Enterprise and Push.

RECENT TESTS OF WIRELESS TELEGRAPHY

Biggest Power House and Power Maker in the World—Model Trolley System—Carrying Freight on Trolley Lines.

The Marconi system of wireless telegraphy has not produced the expected sensation in financial circles of London. Money to back the development of the invention is forthcoming with the liberality of count...

Many experiments with the system has been made in this country with moderate success. The government is so impressed with its usefulness that it is to be given a practical trial on the war ships in Manila bay, and between the war ships and the shore.

It cannot be said that the maneuvers have done much save to demonstrate the utility of wireless telegraphy. The use of this in the quite immediate future promises to be great, and its practical value evolution opens a new field in naval strategy—and an entirely new field. The mere telegraphing from one place to another is of small account, nor do we see much in the contention that while ordinary cables can be cut, the Marconi system is not, a similar reason to that which tells us why cherubs cannot sit down. It is very certain that means to tap, divert or destroy wireless messages will be evolved and brought to a fine art very quickly now that the system stands ready to be used.

We may look, too, for an increased attention to ways and means for destroying ships' masts, etc. None the less, the system holds immense possibilities now which progress in invention will extend, not alter. In the past headquarters have not been able to communicate with fleets in ports, or else by means of dispatched vessels. With wireless telegraphy that communication is possible at sea. As yet, the distance that can be communicated over is not great, but in comparison with other methods—saving searchlights, which are troublesome by reason of the attention they attract—it is immense. To send signals, say, across the Atlantic might be very useful, and eventually may become a fact of emphasis; but for practical purposes the range is not great. Invisible signals through fog, or at night, is a thing nearly as great, because no other means (or, at any rate, no means that would not attract attention) exist. Fog, though we are apt to think of it as a hindrance, is the most potent factor in naval strategy, especially in home waters. Eventually, if not immediately, the result of wireless telegraphy being adopted will be to 'put the cards on the table' in naval strategy.

Mammoth Power House. The largest power house in the world, and in which the largest amount of power is developed, is the station of the Niagara Falls power company, two miles above the Falls.

In this station there are in operation eight mammoth generators, each of which is capable of developing 5,000 horse power, making the present total capacity of the station 40,000 horse power. But, in addition to these there are now in course of erection two more generators of the same capacity, which will bring the output of the station to 50,000 horse power, a wonderful amount of force. Each of the 5,000 horse power generators is connected by a long steel tube to a turbine at the bottom of the big wheel pit. The generators in the dynamo room produce current at a voltage of 2,300, and the force of the station is divided up and sent over various lines to give service to the power company's patrons. It is used in many ways and at many voltages. Carborundum, aluminum, caustic soda, bleaching powder, peroxide of soda and other articles are manufactured in the factories operated by the electric power from this station. All the electric roads in the city of Niagara Falls are operated by the current; the trolley lines from Niagara Falls to Buffalo and from Buffalo to Lockport also run under this power, while twenty-five miles away, in the city of Buffalo, trolley cars are propelled and the streets lighted, malleable iron castings, flouring mills, printing presses and other machinery are run by the subtle force of the wonderful Niagara development. In one great grain elevator there is a long line of motors

operated by Niagara power, and these motors serve to transfer grain from the elevator to the boats or from the boats to the elevator.

Soon this power station will be still further enlarged or a new one of similar capacity built close by, which will give a total of 100,000 horse power. One of the Canadian side, back from the Horseshoe Fall, the Canadian Niagara Power company, controlled by the same capital as the Niagara Falls Power company, is about to build a power station. Ninety miles away stands the progressive city of Toronto and she is looking toward Niagara for the whirling of the generators that shall in time develop power to be transmitted to that city.

Electricity in Hat Making.

Electricity has greatly reduced the cost of hat manufacture. In the first stage of the manufacture the raw material is simply a piece of fur felt, curled and laid in the shape of a crown's hat. This is placed on one or more blocks, and brought to the finished shape by means of heat applied by iron. As the different parts of the hat are not of equal thickness, the brim being the heaviest and the crown the lightest, different degrees of heat are required, when the different sections of the hat are being finished. It is in this special localization of heat that electric heating is of particular service. Formerly two kinds of irons were used in hat making; one heated by a red-hot slug, and the other by gas jets. In the first case, the iron was likely to be at nearly all times either too hot or too cold. With gas it was even more difficult to localize the heat, and the user had to be breathing noxious fumes. The great heat thrown off added to the unhealthfulness of the occupation, while in warm weather it was almost unbearable. Electric heat, on the contrary, is let just where it is wanted, and, practically, none of it escapes outward. Just before the crown is placed a switch at his bench, the workman closes a switch for the pressing of the heavier portions of the hat. When they are gone over, the current is turned off and the temperature gradually lowers as the crown is approached. The curling of the brim is also done by electricity.

Electric Railway Center.

Anderson, Ind., is the largest electric railway center of the United States in proportion to population. One company, which has its central offices at Anderson, is capitalized at \$6,000,000 and owns 165 miles of electric railway converging on the city. Its power house supplies electric power to cars on all interurban lines and in terminal cities for their local lines—thirty-six miles distant. It is exceeded by but one electric power plant in the United States, that at Niagara Falls, where water power drives the machinery. In Anderson steam power generates the electricity. The central power house cost \$275,000. Lines of electric rays radiate from this city to all surrounding county seats and to the capital city of the state, connecting cities, towns and villages with a combined population of 400,000. Fare on all cross-country lines is 1 cent per mile. All interurban cars have air brakes and air whistles for sounding stations. The lines of this company comprise and connect the local electric railway systems of Anderson, Marion, Muncie, Alexandria and Elwood and a western terminal connects with the local system at Indianapolis. All of the interurban lines parallel street railway lines and nearly all of the right of way is private.

Freight on Trolley Cars.

The fact that a passenger can now ride from New York to Boston on trolley lines is hardly more significant than the extension which has taken place in certain localities in the business of the trolley car, whereby commodities as well as passengers are now carried. The Chicago Tribune reports that the newly opened line between Evanston and Waukegan is equipped and authorized to carry mail, baggage and express. The Chicago line in New England not only carries these, but also serves for distributing freight in small consignments of parcels to dealers or individuals along the line. A separate car is operated for this purpose, and has the great advantage of being able to call both at the store or warehouse where the goods are to be delivered, and also at the store or private home where they are to be delivered. Some few lines, especially in New England, also carry freight by the carload—that is, ordinary freight cars are switched on to these lines and then hauled to their destination by the trolley. In some of the lines that carry express packages, an extra car is used, which is commonly known as a mail car. The natural economies of carrying freight in certain cases on trolley lines are patent, and it is equally patent that some form of power traction is destined, and that, too, before long, to displace the horse in the transport of freight. The changes in the character of the form of pavement yet devised, and cars moving on them the most easily propelled vehicles, the principle of least resistance points significantly to development of such transportation on rails.

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Where Light is Plentiful and Cheap.

Crawfordsville, Ind., lays claim to being the best lighted town in the United States, not even excepting Buffalo. The municipality owns and operates its own electric light plant, providing not only lights for the streets, but also to such consumers as desire it. The plant was put up in the city in opposition to a private concern, which had failed to give satisfaction, and the council decided to make a thorough work of it. A 2,000 candle power arc light is the business portion situated in a building placed at the alley intersections. As the blocks in Crawfordsville are considerably shorter than the regulation length, the city at night presents a dazzling appearance. Complaint is made that the lighting is too dense, as the lights are on all night, and not a cat can slip across a Crawfordsville street at night but that it can be detected easily for a distance of two or three blocks. The city will shortly increase the size of its commercial plant and in this way hopes to defray the total expense of the street lighting. The cost of the street lighting at present, with a limited number of commercial lights, is considerably less than the cost of the same lighting under a private plant, with which the city had contracted for lights on every corner to be extinguished at midnight.

Consul Pitsman's Electric System.

"The system is one of aerial electric current, the so-called 'trolley car' system. It was with great difficulty that the wires could be strung, as on narrow streets and on those where traffic is extensive the state prohibited the company from setting up the poles. The system therefore had to be made arrangements with the different owners of the houses on both sides of the streets, to



Illustration of a trolley car.

VIGOROUS AND ONE HUNDRED

Maria Culbertson, Born in 1799, Celebrates Her Centenary in Nemaha County.

PART OF MOST OF THE NATION'S HISTORY

Children, Grandchildren, Numerous Great Grandchildren and a Great-Grandson in Nebraska—Is a Great Reader.

LINCOLN, Sept. 23.—(Special.)—In Nemaha county, Nebraska, Saturday, September 9, at the home of Major William Daily, there gathered a little company of children "to the third and fourth generation," to unite with Mrs. Maria Culbertson in rejoicing, not merely that she has lived 100 years, but that she has retained her mental vigor and physical powers for so long a time.

With communication tickets a peculiar feature. The street car company, acknowledging the fact that hundreds of persons are bound to use the cars a dozen or more times a day, has issued "communication tickets," divided in two sections. The first section entitles the holder of a communication ticket to the use of one line in both directions and as many times as he chooses, including Sundays. The second section issues communication tickets for the use of all lines, in all directions, and allows the holder to take himself to the accommodations as many times as he chooses. These tickets are valid from three to twelve months and the prices are so low that if a person uses the cars over three times a day, a communication means a saving in the fare for each trip amounting to less than 1 cent.

Her Early Life on the Border.

At the age of about 12 years she removed to Cincinnati, where she lived for one winter, thence to Indiana and subsequently to Kentucky, returning to make her home in Indiana near Madison, where she married at about the age of 26 years, her husband being Charles M. Culbertson. In company with others of the early settlers of that far-off region, she fled from the Indians, who were, as it afterward proved, as badly frightened as were the white settlers, and who were fleeing in the opposite direction as fast as possible.

Brains at a Discount.

When you have a headache, cure it with Wright's Paragon Headache Remedy.

CONSERVATIVES.

The holder of an annuity that she intends to go direct to housekeeping when she marries and gives her friends a chance to buy suitable presents, she never gets enough furniture together to leave a boarding house couple in Parkersburg, W. Va., are just now enjoying their third honeymoon, their previous marital experiences having been diversified by two divorces, all within eight years.

Remarkably Vigorous.

Mrs. Culbertson has retained in a wonderful degree her mental faculties and her physical powers. Her hearing is somewhat impaired, but her sight is good, and her taste, as well as her tastes, her enjoyment of the good things of life, her sense of humor, her ability to go about the house and grounds and to go up and down stairs unaided, all mark her as a most remarkable woman.

Her Appreciation of the Humorous was Well Illustrated in an Incident that occurred at dinner while seated between her son and daughter eating a dish of ice cream.

Her son, turning to her, said: "It seems to me that you are dissipating a good deal for a woman of your age."

AMIALE, BUT FATIGUED.

A Returned Conqueror Sighed for a Brief Rest.

The Roman conqueror was home again, reports the Washington Star. He had viewed the triumphal arches and heard the shouts of pious and patriotic citizens. The calcium lights had played on him for miles along the line of march. The cheers of the communities in arrangement approached him and said, deferentially: "General, have we left anything undone which might convey our appreciation of

Some Twenty Minutes' Sleep.

"Nothing," was the answer. "Has the procession been as long as you think it ought to be in passing a given point?" "It has surpassed my expectations."

QUANTRELL'S MEN RIDE AGAIN.

Forty of the 103 survivors of Quantrell's famous band met recently at the Jackson county fair at Lee's Summit, reports the Kansas City Times. The annual reunion of the old command was held. It was the chief attraction of the fair. At noon "meat call" was sounded and the vets stowed away more good things in an hour than would have fallen to the lot of their whole band in the battle days of the '60's.

NO CRIME OR POVERTY THERE.

A Little Village in Maine that Has Ever Improved and No Povert. Hastings, a little village seated amid the White mountains on the boundary between Maine and New Hampshire, is the most unique town in the United States, if not in the world. It contains over 300 inhabitants at all times of the year, relates the New York Times, and in the winter months when the lumber camps are full the population is doubled. It has two large manufacturing establishments, business houses, two post offices, a postoffice, telephone and telegraph offices, an electric lighting plant, a railroad, a school and churches. In fact, it has every convenience that a town can possibly have, yet it is not town or city or village, as the word is commonly understood, and the visit of the tax collector is an unknown thing.

THE TERRITORY WHERE THE VILLAGE IS LOCATED WAS GRANTED TO RICHARD BATCHELDER BY THE STATE OF MASSACHUSETTS IN 1787, AND SIXTY YEARS AGO FOUR FAMILIES MOVED THERE FROM FRYEBURG, IN THE WESTERN PART OF OXFORD COUNTY, MAINE.

They cleared away about 100 acres of land and built several log cabins. A few years later they were obliged to abandon the settlement on account of the appearance of "Nigger Tom," a runaway slave, who announced to the terrified settlers that he had been "sent by the Lord" to take the property which they had worked hard for years to clear. Then the village was abandoned, and the settlement place, as was known as that until about 1850, when G. A. and D. R. Hastings purchased over 20,000 acres of the land and the Wild River lumber company of New Hampshire took possession. Since then the town has grown with great rapidity, every nation being represented. On any day of the week there are to be seen in the village store, when they call to settle their weekly grocery bills.

THE HOUSES HAVE A FOREIGN ASPECT. THOSE ON THE MAIN STREET ARE ABOUT FORTY FEET WIDE BY FORTY FEET DEEP, TWO STORIES HIGH, SQUARE LIKE IMMENSE DRY GOODS BOXES, PAINTED VENERIAN RED, WITHOUT BLINDS, AND EACH WITH SIX ROOMS ON A FLOOR. THEY ARE COMFORTABLE AND ARE KEPT IN GOOD REPAIR. EVERY HOUSE IS SURROUNDED BY HUGE PILES OF LUMBER, GIVING IT THE APPEARANCE OF A TOWN WITHIN A STOCKADE. THE LARGER BUILDINGS ARE BOUND TO THE EAST BY HUGE CHAINS TO PROTECT THEM FROM THE FERRE GALE WHICH BLOW DOWN THE MOUNTAIN SIDES.

THE MOST REMARKABLE THING ABOUT THIS REMARKABLE TOWN IS THE ABSENCE OF CRIME.

Notwithstanding the heterogeneous population there are no thieves. There was a constable in the place up to two years ago, but when his commission expired it was impossible to find any one to take the position. If perchance it is necessary to bring a person before the trial justice one of the foremen in the lumber mill goes to the culprit and tells him that his presence is desired at the company's store. There the sentence, if the man acknowledges his guilt and he usually does, is given him by the bookkeeper in the store.

IT IS THE ONLY VILLAGE IN THE UNITED STATES WHERE THERE IS NO CARRIAGE ROAD. THE ONLY MEANS OF TRANSPORTATION TO OR FROM THE VILLAGE IS OVER THE RAILROAD WHICH RUNS FROM GLENN'S HASTINGS. THE ROAD FOLLOWS THE VALLEY OF WILD RIVER ALONG A ROUTE SO NARROW THAT IN MANY PLACES THERE IS BARELY ROOM FOR THE RAILS. IT PENETRATES FOURTEEN

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